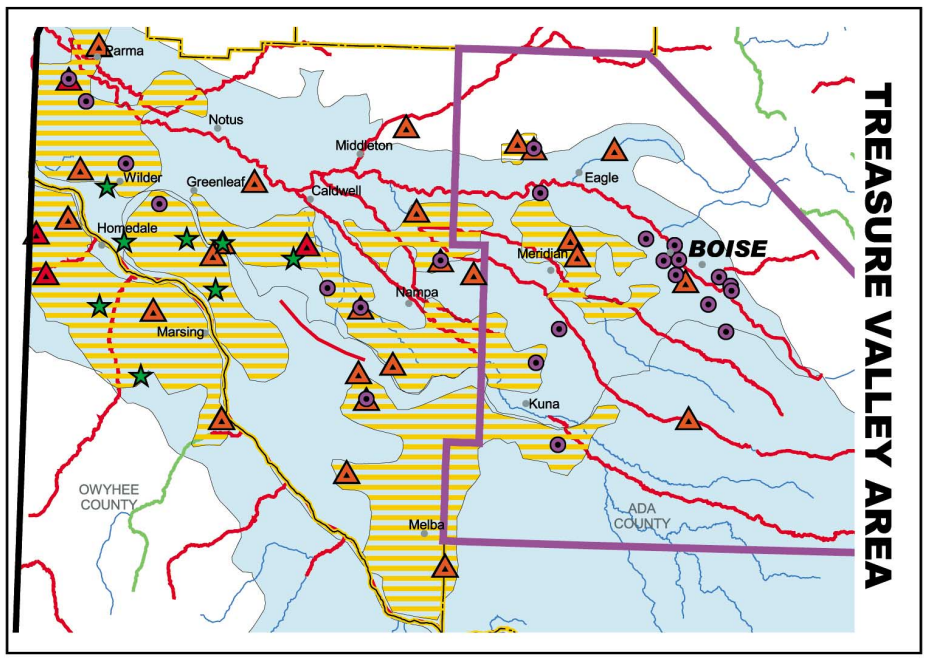
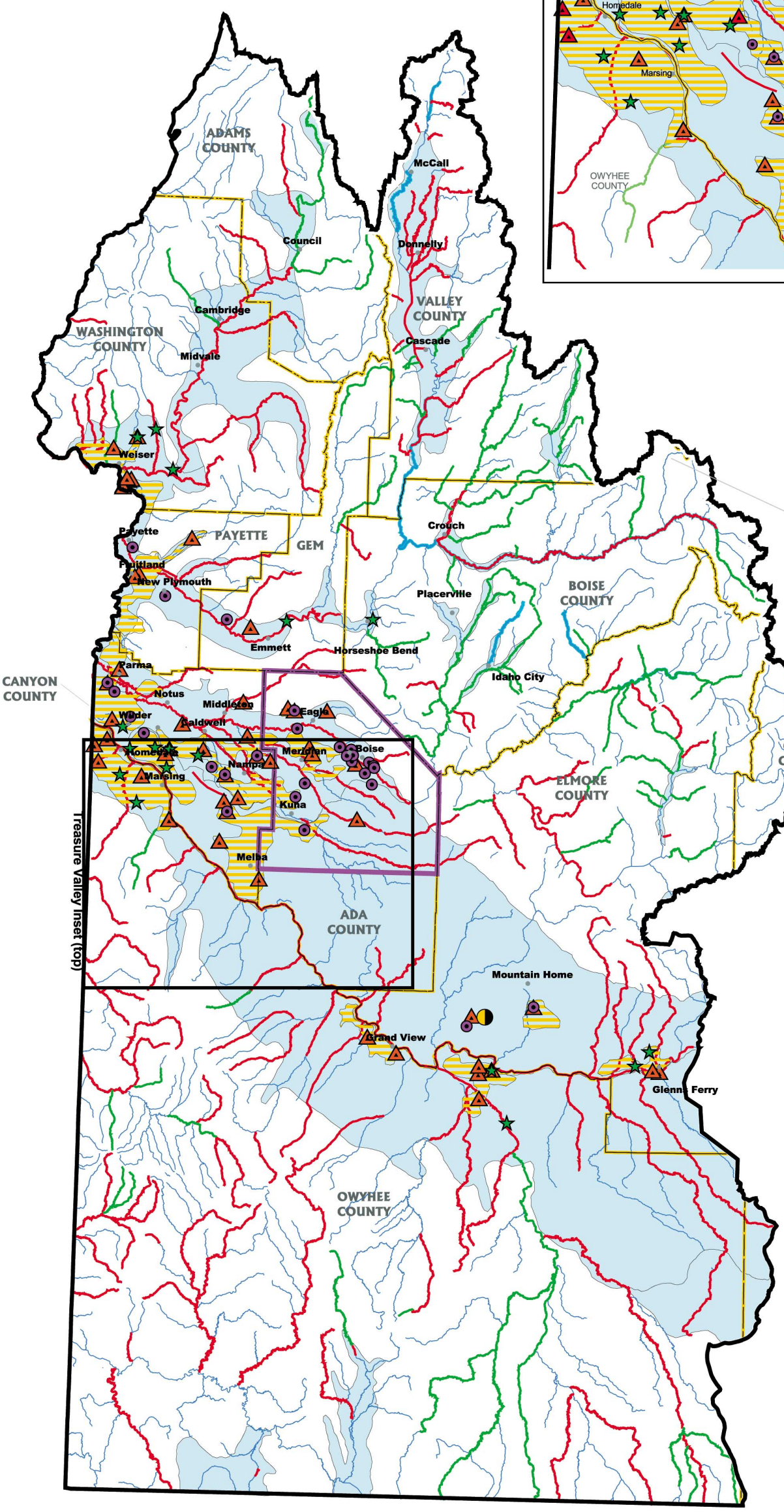
Southwest Basin





Map Legend

Group 1 Sites

- Inorganic Compounds (Arsenic, Fluoride) Exceeds Groundwater Quality or Health Standard
- Organic Compounds (Pesticides, VOCs) Exceeds Groundwater Quality or Health Standard
- Nitrate exceeding drinking water standards (10 mg/l)
- Superfund Sites
- Air Quality Non-Attainment Areas
- Streams
- Streams Determined to Meet Water Quality Standards
- Surface Water Quality Impaired Streams-1998
- Minimum Stream Flows
- Aquifers
- Counties

Nitrate Priority Areas

- more than 25% of samples exceed 5 mg/l

N

0 20 40 Kilometers

0 20 40 Miles

Southwest

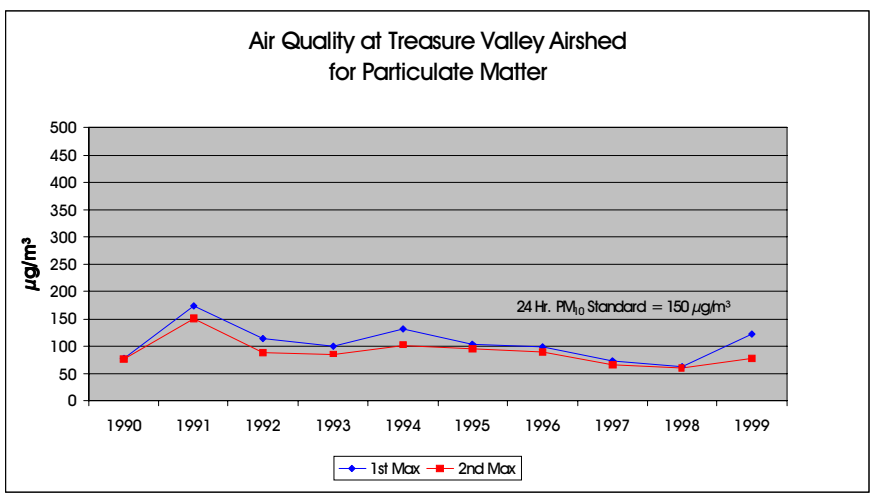
The Southwest Basin ranges from mountains to high plateaus with several major river valleys. This region includes forest land with active timber harvesting, past and current mines, and extensive desert range land. The mountainous areas north of the Snake River include the Boise and Payette Rivers and the recreational areas of McCall/Cascade. The urban Treasure Valley — with the cities of Boise, Meridian, Nampa, and Caldwell — is the population center of the State. The rural Treasure Valley produces over 70 cash crops, including sugar beets, onions, mint, corn, and fruit. The area south of the Snake River is high, semi-desert plateau. The Bruneau River system is composed of two rivers, the Bruneau and Jarbidge, which flow north from Nevada's Humbolt Mountains.

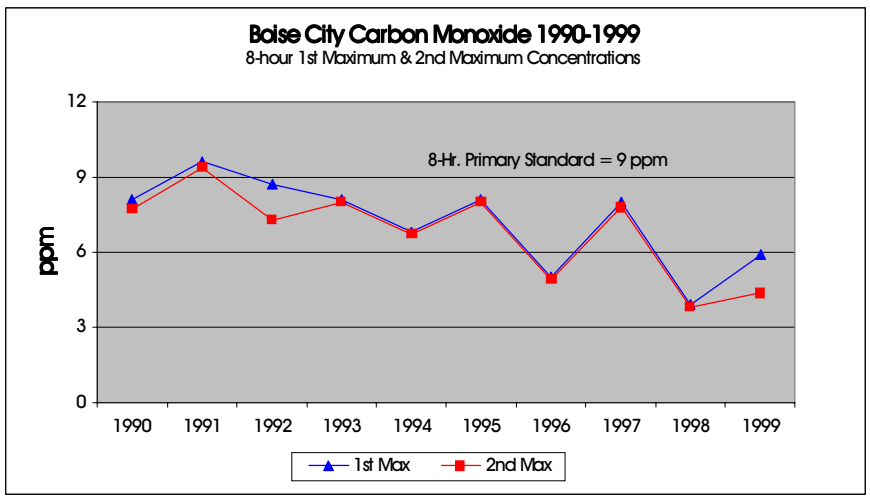
Air Quality

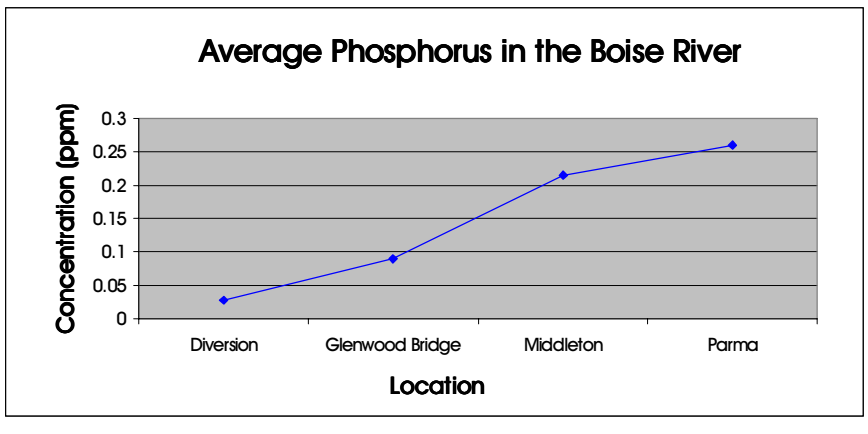
The Southwest Air Quality Control Region extends from the forested areas around McCall, south to the Nevada border, and east to include Mountain Home. This region's air quality concerns are dominated by the urban areas within the Treasure Valley Airshed. These thriving urban areas have a variety of industrial, transportation, and growth-related sources of air pollution. The primary pollutant of concern is particulate matter. Particulate matter monitoring sites in the Treasure Valley Airshed have recorded several exceedances of the State and federal health-based particulate matter standards over the past fifteen years. Exceedances of these standards have activated federal planning requirements in parts of the airshed. DEQ is addressing these federal requirements through its airshed management strategy for the entire Treasure Valley Airshed. Carbon monoxide, ozone, nitrogen oxides, and toxic air pollutants are also a concern for this airshed. The air quality graph below shows the highest and second highest maximum daily readings of particulate matter and carbon monoxide from annual monitoring.

Southwest Air Quality Control Region
Treasure Valley Airshed
Pollutants of Concern

- ✦ Particulate Matter
- ✦ Carbon Monoxide
- ✦ Ozone
- ✦ Hazardous Air Pollutants / Toxic Air Pollutants
- ✦ Nitrogen Oxides







Ground Water

The Southwest Basin contains fourteen Nitrate Priority Areas and dozens of Group 1 Sites. (See the "Southwest Basin" map for locations. See "Definition of Impacted Ground Water Areas and Sites" on page 4 for explanation of these sites.) Contaminants at the Group 1 Sites consist of nitrate, inorganic compounds, and organic compounds.

Ground Water Pollutants of Concern
Southwest Basin

- ✦ Volatile Organic Compounds
  - Perchloroethylene
  - Trichloroethylene
  - Gasoline
- ✦ Semi-volatile Organic Compounds
  - Diesel
- ✦ Nitrates
- ✦ Organics
  - Pesticides
- ✦ Inorganics
  - Arsenic
  - Fluoride

Ground Water Pollutants of Concern
Mountain Home Air Force Base

- ✦ Volatile Organic Compounds
  - Benzene
  - Trichloroethylene

Significant Areas of Contamination

In the Treasure Valley area, there are numerous soil and ground water sites impacted by contaminants such as perchloroethylene, trichloroethylene, and petroleum hydrocarbons. Pesticides are also a contaminant of concern throughout the Southwest Basin.

Under the Mountain Home Air Force Base, ground water is contaminated with trichloroethylene and a shallow aquifer with benzene. The benzene contamination area is approximately 250 feet by 500 feet and contains levels significantly above drinking water standards.

Surface Water

In the Southwest Basin, phosphorous and nitrogen are impacting water quality in Cascade Reservoir. High phosphorous contributions from the surrounding watershed are causing significant deterioration in the reservoir. In Big Payette Lake, phosphorous and nitrogen loading and decreased dissolved oxygen are of concern. The lower Boise River is affected by increased levels of phosphorous and nitrogen, and high temperatures. Pollutants from both the lower Boise River and the Payette River affect water quality in the lower Snake River. There are approximately 22,472 miles of rivers and streams in the Southwest Basin. 4,743 water bodies have been assessed for water quality, and 2,600 miles do not meet water quality standards. The pie chart below shows the percentage of streams meeting water quality standards, the percentage of those not meeting the standards, and the percentage of streams where no specific determination has been made.

Surface Water Pollutants of Concern
Southwest Basin

- ✦ Sediments
- ✦ Nutrients
- ✦ Temperature
- ✦ Bacteria